

ABSTRACT

A communication station includes an antenna system having multiple antennas and delay units for receiving a transmitted signal and outputting a combined signal having a known distortion imparted by the antenna system. The combined signal is in turn processed by a modem, which compensates for the known distortion in a manner which provides improved signal gain. The improved signal gain permits a reduction in transmit power and, accordingly, increased capacity of the communication station. Where the antenna system is to be remotely located from related signal processing equipment, separate units for the RF receiver/transmitter and the other signal processing equipment are provided so that the RF receiver/transmitter may also be remotely located along with the antenna system.